Inventor: Leif Alexander Zars Attorney Docket No.: 5463.002CIP

I claim:

1. A method of approximately field marking an arc of a circle having an obstructed

center, the method comprising:

identifying an eccentric ellipse that will substantially overlap the arc, the ellipse having a

first focus and a second focus, both of which are field accessible;

placing a reference point on a first line at or near the first focus;

placing a second point on the first line, separated from the reference point by a distance

equal to the distance between the first focus and the second focus of the ellipse, at or near the

second focus;

placing a reference point on a second line at or near the first focus;

placing a second point on the second line, separated from the second line's reference

point by a distance equal to the major axis length of the ellipse, at or near the second focus;

drawing the second line tight at a plurality of points on the ellipse where the ellipse

substantially overlaps the arc; and

marking the plurality of points with a marking instrument.

2. The method of claim 1, wherein the first line is a standard tape measure.

3. The method of claim 1, wherein the second line is a color-coded tape measure.

4. The method of claim 1, wherein the first line is a standard tape measure.

5. The method of claim 1, where in the second line is a standard tape measure.

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- 6. The method of claim 1, wherein the first line is a measuring instrument.
- 7. The method of claim 1, wherein the second line is a measuring instrument.
- 8. The method of claim 1, wherein the first line is a string.
- 9. The method of claim 1, wherein the second line is a string.
- 10. The method of claim 1, wherein the marking instrument is a scribe.
- 11. The method of claim 1, wherein the ellipse's minor axis length is 75% of the radius of the circle.
- 12. The method of claim 1, wherein the reference points of the first and second lines are anchored at or near the first focus with a rod.
- 13. The method of claim 1, wherein the arc is delimited by first and second endpoints and wherein the line connecting the first and second endpoints is a chord, the method further comprising calibrating the placement of the first line by:

pulling the second line toward the first endpoint of the arc, and then toward the second endpoint, but not at the same time; and

moving the first line toward or away from the chord, while keeping the first line centered and parallel to the chord, until the first line is in a position where the step of pulling the second line toward either the first or second endpoint will pull the second line tight.

- 14. A device to facilitate field marking an arc of a circle having an obstructed center, the device comprising:
  - a first clamp having a first slot to engage a first measuring instrument; and
- a second clamp having a second slot to engage a second measuring instrument; wherein the second clamp is connected to the first clamp.
  - 15. The device of claim 14, further comprising a handle connected to the first clamp.
- 16. The device of claim 14, further comprising a detachable swivel joint connecting the first clamp to the second clamp.
  - 17. The device of claim 16, wherein the swivel joint comprises a snap.
- 18. The device of claim 17, wherein the snap comprises a female portion connected to the first clamp and a male portion connected to the second clamp.
- 19. A method of approximately marking an arc on a field using a standard tape measure and a color-coded tape measure, the arc being delimited by two endpoints, the arc being part of a circle having an obstructed center, the method comprising:

identifying coordinates of an eccentric ellipse that will substantially overlap the arc, the

ellipse having two foci, both of which are field accessible;

anchoring the starting point of both the standard tape measure and the color-coded tape

measure to a first field location;

extending the standard tape measure to a clamping point at the second field location

separated from the first field location by a distance equal to the distance between the two foci of

the ellipse, wherein the first and second field locations define points on a line running parallel to

a chord connecting the endpoints of the arc;

extending the color-coded tape measure to a clamping point at the second field location;

clamping the standard tape measure and the color-coded tape measure to the second field

location; and

pulling a marking instrument along and against the color-coded tape measure to mark out

the arc.

20. The method of claim 19, wherein the starting points are anchored to the field with

a rod.

21. The method of claim 19, wherein the device of claim 14 is used to clamp the

standard tape measure and the color-coded tape measure together at the second field location.

22. The method of claim 19, wherein the marking instrument is a scribe.

23. The method of claim 19, further comprising making an approximate

determination of where the first and second field locations should be in relation to the arc.

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24. The method of claim 23, further comprising calibrating the placement of the first

and second field locations by:

pulling the color-coded tape measure toward the first endpoint of the arc, and then toward

the second endpoint, but not at the same time; and

moving the standard tape measure toward or away from the chord, while keeping the

standard tape measure centered and parallel to the chord, until the standard tape measure is in a

position where the step of pulling the color-coded tape measure toward either the first or second

endpoint will pull the color-coded tape measure tight.

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